REMARKS

Favorable reconsideration of this application in light of the above amendments and the following remarks is respectfully requested. Claims 1-3, 6 and 13 are pending in this application. Claim 13 is amended herein. No claims have been allowed.

Claim Rejections – 35 U.S.C. § 103(a)

Claims 1-3, 6 and 13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wang et al (U.S. Pub. No. 20020155672 A1; hereinafter "Wang") in view of Koike (U.S. Patent No. 6,392,300).

Wang at Fig. 3 and paragraph 0019 discloses a microelectronic fabrication related to applicant's microelectronic fabrication. It has a bond pad 112b (right hand side connected to patterned conductor layer 102) and a series of fuse layers 112b (left hand side) formed simultaneously therein.

The Examiner at page 4, first full paragraph and page 6, second full paragraph, acknowledges that Wang does not teach a fuse layer formed simultaneously with an alignment mark within a microelectronic fabrication.

Rather, the Examiner at page 4, second full paragraph and page 6, third full paragraph, relies upon Koike at Fig. 5 and col. 2, lines 8-11 for teaching that an alignment mark 27A may be formed simultaneously with a fuse layer (not shown) or a bond pad 27B within a microelectronic fabrication.

The Examiner at page 4, third full paragraph and page 6, fourth full paragraph first rationalizes suggestion or motivation for modification or combination of Wang and Koike upon the assertion that they are in the same field of endeavor. The Examiner also second rationalizes suggestion or motivation for providing Koike's alignment mark and a fuse formed

simultaneously in an upper metal layer within Wang's microelectronic fabrication so that the alignment mark may be employed for positioning a laser when severing the fuse, apparently in accord with Koika at col. 2, lines 21-28.

In response in a first instance, applicant has amended claim 13 in a fashion to incorporate therein a limitation that applicant believes to patentably distinguish applicant's invention from that which is taught within Koike in particular, or Wang and Koike as combined by the Examiner. Although not specifically indicated by the Examiner, claim 13 otherwise appears anticipated by Koike alone.

In that regard, applicant has amended claim 13 to incorporate therein the limitation that applicant's fuse layer, alignment mark and bond pad are formed simultaneously within applicant's microelectronic fabrication. Support for this limitation newly incorporated into claim 13 is found within claim 3, which is currently dependent upon claim 1. Claim 3 is also subject to this response.

In comparison, applicant first notes that the Examiner acknowledges that Wang does not disclose an alignment mark formed simultaneously with a fuse layer and a bond pad within a microelectronic fabrication. In addition, while Koike at Fig. 5 and col. 2, lines 1-11 does teach an alignment mark 27A formed simultaneously with a bond pad 27B, Koike further provides that "a metal fuse (not shown) or a bonding pad 27B is formed from a part of the fourth aluminum layer." (emphasis added) In addition "[a]n alignment mark 27A is also formed from part of the fourth aluminum layer." Thus, Koike apparently explicitly teaches that only either a bond pad or a fuse layer is formed simultaneously with an alignment mark, but not both a bond pad and a fuse layer formed simultaneously with the alignment mark.

Applicant within claim 3 and claim 13 explicitly claims the simultaneous formation of a bond pad, a fuse layer and an alignment mark. However, each of the prior art

references explicitly teaches simultaneous formation of only two of those components. Wang teaches simultaneous formation of fuse layer and bond pad with no mention of an alignment mark. Koike teaches simultaneous formation of alignment mark with either a fuse layer or a bond pad. Thus, Koike implicitly teaches that an alignment mark may not be formed when a fuse layer and a bond pad are present. This provides a result consistent with Wang. A person skilled in that art at the time of applicant's invention might plausibly conclude that only two of a fuse layer, a bond pad and an alignment mark may be formed simultaneously, since the prior art appears to explicitly provide for only that result.

"A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." MPEP 2141.02 (citing *W.L. Gore and Associates, Inc. v. Garlock, Inc.* (citation omitted)).

"[T]he prior art reference (or references when combined) must teach or suggest all of the claim limitations." MPEP 2143.

Thus, since: (1) each and every limitation within applicant's invention as disclosed and claimed within claim 3 and claim 13 is not taught within Wang, Koike or the combination thereof with respect to all three of a fuse layer, a bond pad and an alignment mark being formed simultaneously within a microelectronic fabrication; and (2) at least Koike apparently teaches away from that result, applicant asserts that claim 3 and claim 13 may not properly be rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of Koike.

In light of the foregoing response, applicant respectfully requests that the Examiner's rejections of claims 3 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of Koike be withdrawn.

In response in a second instance, applicant asserts that Wang and Koike may not properly be combined to provide applicant's claimed invention incident to the Examiner's first rationale directed toward their mere existence in the same field of endeavor, since the same provides an insufficient basis to establish prima facie obviousness.

"The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." MPEP 2143.01 (citing *In re Mills* (citation omitted)).

In accord with *In re Mills*, proper modification or combination of references requires that the suggestion or motivation for such modification or combination be found within the prior art references themselves. In contrast, the fact that a pair of references may be in the same field of endeavor, as observed by an Examiner, does not impute into the references a suggestion or motivation for modification or combination to provide an applicant's claimed invention.

For purposes of illustration, a pair of references may clearly be in the same field of endeavor. However, it is also plausible that each of the pair of references teaches away from the other of the pair of references such that upon combination in a fashion as suggested by an Examiner a principal of operation of a base reference is changed or it is otherwise rendered unsatisfactory for its intended purpose. MPEP 2143.01. Under such circumstances, the references are clearly not combinable although they are in the same field of endeavor. Thus, it is the teachings of the references themselves, and not their mere existence in the same field of endeavor, that must be evaluated for purposes of suggestion or motivation for modification or combination of references. Absent a recognition and analysis of such teachings references may not properly be combined to reject any of an applicant's claims to the applicant's invention under 35 U.S.C. § 103(a).

In response in a third instance, applicant asserts that the Examiner's second rationalization for suggestion or motivation for modification or combination of Wang with Koike, while apparently applicable to a specific situation taught within Koike, is not necessarily applicable to Wang. For this reason also, applicant additionally asserts that no suggestion or motivation for modification or combination of Wang with Koike exists.

In that regard, the Examiner's second rationalization is apparently predicated upon a teaching within Koike at col. 2, lines 25-28 that "[i]f the alignment mark 27A is removed, fuse-blow cannot be performed, since the alignment mark 27A, for use in positioning the laser when the fuse is blown, cannot be detected." Thus, the Examiner apparently concludes that a suggestion or motivation for modification or combination of Wang (teaching a series of fuse layers and a bond pad formed simultaneously) by including Koike (teaching an alignment mark formed simultaneously with a fuse layer) is predicated upon Koike's teaching of a need for an alignment mark for positioning a laser when severing a fuse layer.

In accord with the foregoing teaching, applicant understands that Koike specifically intends an alignment mark for positioning purposes when severing a fuse layer within a microelectronic product. Although Koike's representative alignment mark is formed simultaneously with Koike's fuse layer, such would not necessarily appear to be a requirement within Koike's invention. Rather, an alignment mark formed at an alternative level within a microelectronic product would also appear to be operational for purposes of alignment when severing a fuse layer.

In further comparison, applicant notes that Wang at paragraph 0021 teaches that "a passivation layer 118 is formed over the substrate 100 exposing just the bonding pad 112a and the metal fuses 112b." Thus, in addition to being silent with regard to the presence of an alignment mark formed simultaneously with a fuse layer and a bond pad, it might also be implicit within Wang that Wang does not form any other layers simultaneously with Wang's

bonding pad 112a and metal fuses 112b, but rather "just the bonding pad 112a and the metal fuses 112b." Had Wang simultaneously formed an alignment mark, the same would also have clearly been exposed for proper alignment purposes. Applicant further notes that there might be multiple rationale why Wang apparently does not form an alignment mark simultaneously with Wang's fuse layers and bond pad. As an alternative to an alignment mark, applicant suggests that since Wang forms Wang's series of fuse layers as a plurality of closely spaced fuse layers, they might plausibly be formed in a fashion that provides alignment mark purposes in addition to fuse layer purposes. Under such circumstances, Wang would need no extrinsic alignment mark, whether formed simultaneously with Wang's fuse layers or not.

Thus, since the Examiner's second rationale for suggestion or motivation for modification or combination of Wang with Koike is apparently applicable to a specific situation within Koike, need not necessarily be applicable to Wang and may in fact change Wangs's principle of operation, applicant asserts that Wang may not properly be combined with Koike for reasons in accord with the Examiner's second rationale. For this reason also, applicant asserts that none of applicant's claims to applicant's invention may properly be rejected under 35 U.S.C.§ 103(a) as being unpatentable over Wang in view of Koike, for reasons as advanced by the Examiner.

In light of the foregoing responses, applicant's respectfully requests that the Examiner's rejections of claims 1-3, 6 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of Koike be withdrawn.

SUMMARY

Applicant's invention as disclosed and claimed within claim 1 and claim 13 is directed towards a method for fabricating a microelectronic fabrication that provides for a fuse layer formed simultaneously with an alignment mark within the microelectronic fabrication.

There is no suggestion or motivation for modification or combination of references for reasons as provided by the Examiner. Alternatively, all limitations within applicant's claimed invention are not taught by the applied prior art.

CONCLUSION

On the basis of the above remarks, favorable reconsideration of this application, and its early allowance, is respectfully requested.

Any inquiries relating to this or previous communications pertaining to this application may be directed towards the undersigned attorney at 248-540-4040, at the Examiner's convenience.

Respectfully submitted,

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